

What is claimed is:

1. An image processor comprising:

conversion table storing means for storing a plurality of conversion tables to determine a correspondence relationship between image reproduction data, including development area information, and tone data;

halftone processing means for receiving the tone data of respective colors and then finding, for each color, the image reproduction data at each dot by referring to one of the conversion tables; and

image reproducing engine for reproducing images by receiving the image reproduction data at each dot for each color and by determining a development area at the dot on the basis of the development area information included in the image reproduction data;

wherein the conversion table storing means stores:

at least two conversion tables A and B where the correspondence relationship is determined in such a manner that halftone spots are formed in lines and screen angles are perpendicular to each other; and

at least one conversion table C where the correspondence relationship is determined in such a manner that angle differences between a screen angle determined by the conversion table C and the screen angles determined by the two conversion tables A and B become irrational tangent angles.

2. An image processor according to claim 1, wherein the image reproduction data further includes development

05643330-000000

area location information, and

the image reproduction engine determines a development area at the dot on the basis of the development area information and the development area location information included in the image reproduction data.

3. An image processor according to claim 2, wherein the development area information is a beam irradiation area and the development area location information is a beam irradiation location in a beam scan direction within the dot and

the image reproducing engine attaches toner by irradiating a beam in the development area.

4. An image processor according to claim 1, wherein the conversion table is composed of at least:

a gamma table to determine a relationship between the tone data and the development area information; and

an index matrix in which an identifier to specify the gamma table is located at a corresponding position on the matrix.

5. An image processor according to claim 4, wherein regarding index matrices of the two conversion tables A and B, one index matrix is formed by rotating the other index matrix by 90° in a clockwise direction or a counterclockwise direction.

6. An image processor according to claim 1, wherein regarding the conversion table A and the conversion table

002280-0624060

C, a sum of their screen angles is approximately  $90^\circ$  or  $-90^\circ$  and an angle difference between their screen angles is an irrational tangent angle within the range of  $30^\circ$  to  $40^\circ$ .

7. An image processor according to claim 1, wherein the conversion table storing means further stores a conversion table D, and in the conversion table C and the conversion table D the correspondence relationship is determined in such a manner that halftone spots are formed in lines and their screen angles are perpendicular to each other.

8. A printer system comprising the image processor as stated in any one of claims 1 through 7.

9. An image processing method comprising the steps of:

storing, in a storing means, conversion tables to determine a correspondence relationship between image reproduction data, including development area information, and tone data, the conversion tables including:

at least two conversion tables A and B where the correspondence relationship is determined in such a manner that halftone spots are formed in lines and screen angles are perpendicular to each other; and

at least one conversion table C where the correspondence relationship is determined in such a manner that angle differences between a screen angle determined by the conversion table C and the screen angles determined by the two conversion tables A and

09043298.032300

B become irrational tangent angles;  
finding for each of plural colors the image  
reproducing data at each dot from the tone data at each dot  
by referring to one of the conversion tables; and  
determining a development area at the dot on the basis  
of the development area information included in the image  
reproduction data at the dot, thereby reproducing images.

10. An image processing method according to claim  
9, wherein the image reproduction data further includes  
development area location information, and a development  
area at the dot is determined on the basis of the development  
area information and the development area location  
information.

11. A record medium with an image processing program  
recorded thereon, the image processing program being  
operable on a computer and comprising the steps of:

storing, as conversion tables to determine a  
correspondence relationship between image reproduction  
data, including development area information, and tone data,  
two conversion tables A and B in which the correspondence  
relationship is determined in such a manner that halftone  
spots are formed in lines and their screen angles are  
perpendicular to each other; and

storing, as a conversion table to determine a  
correspondence relationship between image reproduction  
data, including development area information, and tone data,  
one conversion table C in which the correspondence  
relationship is determined in such a manner that angle

05043258-082200

12. A record medium according to claim 11, wherein the image processing program further comprises the step of finding, for each of the plural colors, the image reproduction data at each dot from the tone data at each dot by referring to one of the recorded conversion tables.

13. A record medium according to claim 11 or 12, wherein the image reproduction data further includes development area location information.